

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:
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Date of mailing
(day/month/year) **06 APR 2005**

Applicant's or agent's file reference

100.0025PCT

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/US04/31844

International filing date (day/month/year)

29 September 2004 (29.09.2004)

Priority date (day/month/year)

30 September 2003 (30.09.2003)

International Patent Classification (IPC) or both national classification and IPC

IPC(7): A61F 2/06 and US Cl.: 623/1.16

Applicant

ALVEOLUS, INC.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☒ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☒ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/ US

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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International Application No.

PCT/US04/31844

Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This opinion has been established on the basis of a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).

2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

☐ a sequence listing

☐ table(s) related to the sequence listing

b. format of material

☐ in written format

☐ in computer readable form

c. time of filing/furnishing

☐ contained in international application as filed.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International Application No.

PCT/US04/31844

Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application

☒ claims Nos. 4-8

because:

☐ the said international application, or the said claim Nos. _____ relate to the following subject matter which does not require an international preliminary examination (*specify*):

☒ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. 4-8 are so unclear that no meaningful opinion could be formed (*specify*):

Claims 4-8 are improper multiple dependent claims.

☐ the claims, or said claims Nos. _____ are so inadequately supported by the description that no meaningful opinion could be formed.

☐ no international search report has been established for said claims Nos. _____

☐ the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the Administrative Instructions in that:

the written form

☐ has not been furnished

☐ does not comply with the standard

the computer readable form

☐ has not been furnished

☐ does not comply with the standard

☐ the tables related to the nucleotide and/or amino acid sequence listing, if in computer readable form only, do not comply with the technical requirements provided for in Annex C-bis of the Administrative Instructions.

☐ See Supplemental Box for further details.

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International Application No.
PCT/US04/31004

Box No. V Reasoned statement under Rule 43 bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims <u>NONE</u>	YES
	Claims <u>1-3</u>	NO
Inventive step (IS)	Claims <u>NONE</u>	YES
	Claims <u>1-3</u>	NO
Industrial applicability (IA)	Claims <u>1-3</u>	YES
	Claims <u>NONE</u>	NO

2. Citations and explanations:

Claims 1-3 lack novelty under PCT Article 33(2) as being anticipated by Lombardi (WO 01/58384 A1).

Lombardi discloses a stent with all the elements of claim 1. See Figures 9 and 11 and page 17, lines 21-25 for a stent with a tubular frame that can be widened out from an initial state to a support state in which the support state consists of at least two annular segments (64) that are formed by struts (54) that endlessly flow each other in a corrugated manner via transitional sections and in which adjacent annular segments (64) are coupled by connectors (62). See Figure 18 and page 22, lines 30-36 for the front transitional section on the end-side annular segments having a widened head (76c) that projects axially opposite the adjacent transitional segments and has a convexly rounded front section (ends of 76c) and a concavely rounded throat section (end of slot between fingers 76a, 76b) between the head end (76c) and the struts (54) connected to the head end (76c). See Figure 13 and page 19, lines 25-32 for every second front transitional section on the end-side annular segments having a widened head (76c).

Claim 2, see Figure 18 for the head end (76c) being configured in a mushroom shape and the convex front section (ends of 76c) and the concave throat section (end of slot between fingers 76a, 76b) being connected to each other by rounded edge sections (rounded outer surfaces of fingers 76a, 76b).

Claim 3, see Figure 18 for throat section (end of slot between fingers 76a, 76b) extending at least in areas over the edge-side transitional sections of the adjacent struts (54) in the initial state.

Claims 1-3 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International Application No.

PCT/US04/31844

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

Claim 1 is objected to under PCT Rule 66.2(a)(iii) as containing the following defect(s) in the form or contents thereof:

- a) In claim 1, line 3, "support state (2)" should be --support state (S)--.
- b) In claim 1, line 5, "sections (1, 12)" should be --sections (11, 11', 12)--.
- c) In claim 1, line 6, "connectors (13)" should be --connectors (13', 13)--.